



sotrem

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SECTION 1 MATERIAL DESCRIPTION

Product Name: Aluminum ganule / AGL-XXX

Material uses: Industrial applications: Primary metal; casting/molten and alloying; processing and manufacturing into articles and semi-fabricated articles, building and construction products, packaging products.

Manufactured by: Sotrem inc.

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SECTION 2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE AND ODOR: Light gray, metal granules with no odor.

IMMEDIATE CONCERNS: Not hazardous in solid form. Fines and/or particles from processing may be readily ignitable. Fine particles and molten metal are highly reactive with water, oxidizers, acids, alkalies, halogenated compounds and certain metal oxides. High exposure to aluminum fumes may produce irritation to eyes and respiratory system.

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation.

SKIN: May cause skin irritation. Allergic reactions are possible.

INHALATION: May result in respiratory irritation.

MEDICAL CONDITIONS AGGRAVATED: Asthma and other respiratory disorders.

ROUTES OF ENTRY: Eye and skin contact, inhalation of vapors, or accidental ingestion..

SECTION 3 COMPOSITION AND INGREDIENTS

| Chemical Name | BY Weight % | CAS No. |
|---------------|-------------|-----------|
| Aluminum | 95-99.9% | 7429-90-5 |
| Copper | 0-1.0% | 7440-50-8 |
| Iron | 0-0.50% | 7439-89-6 |
| Magnesium | 0-0.50% | 7439-95-4 |
| Zinc | 0-2.0% | 7440-66-6 |
| Silicon | 0-1.0% | 7440-21-3 |

SECTION 4 FIRST AID MEASURES

EYES: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Consult a physician.

SKIN: Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

INGESTION: Not Applicable

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

Notes to Physician: Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.



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SECTION 5 REACTIVITY DATA

FLASHPOINT AND METHOD: Not Applicable

EXTINGUISHING MEDIA: Dry earth, sand, or Class D media ONLY. Do not use water. Do not use halogenated extinguishing media.

EXPLOSION HAZARDS: Heat generation including ignition may occur if product is damp or exposed to water. Dust clouds may be explosive. Prevent accumulations of dust. If particles or fines become wet, do not store in a tight container that could permit hydrogen gas to accumulate.

FIRE FIGHTING EQUIPMENT: Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and consider use of unmanned hose holders or monitor nozzles for fighting large fires.

HAZARDOUS DECOMPOSITION PRODUCTS: Metal oxides, hydrogen.

SECTION 6 ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean by scooping and mild brushing. Cleaning should be done with a soft brush and pickup should be done with a non-spark conductive scoops. Never employ water.

COMMENTS: Recycle unused/scrap material if possible.

SECTION 7 HANDLING AND STORAGE

GENERAL PROCEDURES: Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Avoid breathing vapor over open containers. Avoid open container exposure to damp air. Avoid breathing aerosols, mists, and vapors.

HANDLING: Use appropriate personal protective equipment as specified in Section 8. Handle in a well ventilated area. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

STORAGE: Material must be kept dry. DO NOT STORE OUTSIDE.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines: The following table lists exposure limits for all chemicals listed in Section 3 where a limit exists.

| <u>Chemical Name</u> | <u>ACGIH TLV</u> | <u>OSHA PEL</u> |
|-----------------------|--|--|
| Aluminum 7429-90-5 | TWA: 1 mg/m ³ (dust) | TWA: 15 mg/m ³ (total) TWA: 5 mg/m ³ (respirable) |
| Silicon 7440-21-3 | None | TWA: 15 mg/m ³ (total) |
| Copper 7440-50-8 | TWA: 0.2 mg/m ³ (fume) TWA: 1 mg/m ³ (dust) | TWA: 0.1 mg/m ³ (dust) |
| Magnesium 7439-95-4 | TWA: 10 mg/m ³ | TWA: 10 mg/m ³ (total) |
| ZINC 7440-66-6 | TWA: 5 mg/m ³ (fume) | TWA: 5 mg/m ³ (fume) |

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety goggles or glasses are recommended. Plastic face shields should be used for complete face protection to protect against possible splashing or spraying of material. ANSI Z87.1 or approved equivalent.

SKIN: Chemical-resistant gloves and chemical goggles, face-shield, and synthetic apron or coveralls should be used to prevent contact with eyes, skin, or clothing. Wear nitrile or neoprene gloves. Chemical resistant gloves lined with polyethylene offer maximum protection.

RESPIRATORY: Exhaust ventilation recommended. An organic vapor cartridge or fresh air supplied respirator (NIOSH approved) may be necessary for certain applications. Consider the type of application, environmental concentrations, and other materials being used concurrently when determining respirator use and selection. Observe OSHA regulations for respirator use (29 CFR 1910.134).

PROTECTIVE CLOTHING: Protective clothing should be selected and used in accordance with 'Guidelines for the Selection of Chemical Protective Clothing' published by ACGIH.

WORK HYGIENIC PRACTICES: Contaminated clothing should be changed and washed before reuse. Eating, drinking and smoking in immediate work area should be prohibited. Wash hands before eating.

OTHER USE PRECAUTIONS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Training is important. Follow all label precautions.



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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

ODOR: None

COLOR: Gray

pH: Not Applicable

VAPOR PRESSURE: Not Applicable

VAPOR DENSITY: Not Applicable

BOILING POINT: 2056°C (3733°F)

MELTING POINT: 565°C (1050°F) to 660°C (1220°F)

Specific Gravity/Density: 1.2-2.7 g/cm³

VOC Content: N/A

SECTION 10 STABILITY AND REACTIVITY

Metal is stable and non-reactive under normal condition of use, storage and transport.

STABILITY: This product is stable under normal ambient conditions of temperature and pressure.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Heat generation and release of flammable hydrogen gas may occur when exposed to water, strong oxidizers, acids and alkalies, and halogenated compounds. A violent thermite reaction may occur if exposed to certain metal oxides, (ie. iron oxide, (rust), or copper and lead oxides.)

HAZARDOUS DECOMPOSITION PRODUCTS: Thermal oxidative decomposition can produce metal oxides and hydrogen.

INCOMPATIBLE MATERIALS: Water, strong oxidizers, acids and alkalies, and halogenated compounds.

COMMENTS: STORE INDOORS, KEEP DRY. DO NOT ALLOW DUST TO ACCUMULATE.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Potential Health Effects

Inhalation: Not expected to be an inhalation hazard unless it is heated or if aluminum dust is present. If heated or in dust form, it may cause respiratory tract irritation. Heating aluminum can release aluminum oxide fumes and cause fume metal fever when inhaled. This is a flu-like illness with symptoms of metallic taste, fever, chills, aches, chest tightness, and cough.

Skin Contact: Exposure to aluminum may cause skin irritation

Eyes Contact: Exposure to aluminum dust may cause eye irritation by mechanical action.

Ingestion: Not applicable

Acute Toxicity: The product itself has not been tested.

SECTION 12 ECOLOGICAL INFORMATION

Eco toxicity: No known significant effects or critical hazards. Refer to Section 6 for information regarding accidental release and Section 15 for regulatory reporting information.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal : Recycle, if possible. The generation of waste should be avoided or minimized wherever possible. Disposal should be in accordance with applicable regional, national and local laws and regulations. Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 14 TRANSPORT INFORMATION

DOT

U.S. Department of Transportation

Not Regulated

TDG

Transport Dangerous Goods (Canada)

Not Regulated

MEX

Transport Dangerous Goods (Mexico)

Not Regulated

SECTION 15 REGULATORY INFORMATION
UNITED STATES
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)
311/312 HAZARD CATEGORIES: None Known

313 REPORTABLE INGREDIENTS: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

EPCRA SECTION 313 SUPPLIER NOTIFICATION

| Chemical Name | Wt. % | CAS |
|----------------------|-------|-----------|
| Aluminum | 94.5 | 7429-90-5 |
| Copper (fumes, dust) | <= 1 | 7440-50-8 |
| Zinc (fumes, dust) | <= 1 | 7440-66-6 |

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)
CERCLA REGULATORY: For this /these chemicals, release of more than the Reportable Quantity to the environment in a 24- hour period requires notification to the National Response Center (800-424-8802 or 202-426-2675):

| Chemical Name | Wt. % | CERCLA RQ |
|----------------------|-------|------------|
| Copper (fumes, dust) | <= 1 | 5,000 lbs. |
| Zinc (fumes, dust) | <= 1 | 1,000 |

TSCA (TOXIC SUBSTANCE CONTROL ACT)
TSCA STATUS: This product or its components are listed in or exempt from the TSCA inventory requirements.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
29 CFR 1910.119-- PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS: None of the chemicals in this product are considered highly hazardous by OSHA.

CALIFORNIA PROPOSITION 65: This product contains chemical(s) which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

None

OSHA HAZARD COMM. RULE: The contents of the MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

CANADA
WHM IS HAZARD SYMBOL AND CLASSIFICATION


Reactive Flammable Material

Class B6: Reactive Flammable Material

WHM IS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM): This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

DOMESTIC SUBSTANCE LIST (INVENTORY): All components in this product are included on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

EUROPEAN COMMUNITY



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EEC LABEL SYMBOL AND CLASSIFICATION



"F" - Highly flammable

RISK PHRASES

R15: Contact with water liberates extremely flammable gases. R17: Spontaneously flammable in air.

SAFETY PHRASES

S2: Keep out of the reach of children.

S7/8: Keep container tightly closed and dry.

S43: In case of fire, use dry earth, sand, or Class D media ONLY. Do not use halogenated extinguishing media. Never use water.

SECTION 16 OTHER INFORMATION

The information in this Safety Data Sheet was obtained from sources believed to be reliable, but it is not guaranteed. This information may be used in a manner which is beyond our knowledge and/or control. Therefore, this information is provided for advice only, with no representation of warranty, either express or implied.

The condition or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this reason, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of the product.